

MYRIAPODS FROM MESOPOTAMIA AND PERSIA.

COLLECTED BY MR. P. A. BUXTON

BY

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(With two plates.)

The material collected by Mr. P. A. Buxton, though limited to a few specimens, is far from being void of interest.

A new Lithobiid has had to be inscribed to the Persian fauna. The rediscovery of Humbert and Saussure's *Strongylosoma persicum* offered good opportunity for describing the sexual characters of the female, which were still unknown; such a type of vulva has not been observed before. The capture of a species of the genus *Polyxenus*, most likely to be *P. ponticus*, afforded the possibility of making up for the blanks of Lignau's diagnosis.

For the favor granted in enabling him to put on records such valuable specimens, the author wishes to express his sincerest thanks to Mr. Buxton.

MESOPOTAMIA.

PACHYMERIUM FERRUGINEUM (C. Koch, 1835).

Two female specimens with 55 pair of legs, from Amara; XII, 1917.

LITHOBIUS ? AERUGINOSUS L. Koch, 1862.

Length 10.50 mill.; breadth 1.30 mill.

Tergites 9, 11, and 13 with rounded angles. Antennæ 20-jointed. Ocelli 1+3 in a single irregular row. Coxosternal teeth of maxillipedes 2+2 and strong lateral spines.

Tarsi 1 to 13 single-jointed. Coxal pores: 2, 2, 2, 2. Spinal armature of legs

1st pair	o. o.	p.	a	.	a	.	} occasionally p is to be seen dorsally on the 4th joint.
	o. o.	mp.	m	.	m	.	
2nd pair	o. o.	p.	a	.	a	.	} or o. o. p. a p. a p.
	o. o.	mp.	am	.	m	.	
3rd pair	o. o.	p.	a	p.	a	p.	} or o. o. mp. am . m .
	o. o.	mp.	am	.	m	.	
4th pair	o. o.	p.	a	p.	a	p.	} or o. o. a p. a p. a p.
	o. o.	mp.	amp.	am	.	.	
5th pair	o. o.	p.	a	p.	a	p.	} or o. o. mp. am . am .
	o. o.	mp.	am	.	am	.	
6th & 7th pair	o. o.	p.	a	p.	a	p.	} or o. o. amp. a p. a p.
	o. o.	mp.	am	.	am	.	
8th pair	o. o.	amp.	p.	a	p.	.	} or o. o. mp. am . am .
	o. o.	mp.	am	.	am	.	
9th & 10th pair	o. o.	amp.	p.	a	p.	.	} or o. o. amp. p. p.
	o. o.	mp.	am	.	am	.	
11th pair	o. o.	amp.	p.	p.	.	.	} or o. o. amp. p. p.
	o. o.	mp.	amp.	am	.	.	
12th & 13th pair	o. o.	amp.	p.	p.	.	.	} or o. m. amp. am . a .
	o. o.	mp.	am	.	m	.	
14th pair	o. m.	amp.	am	.	a	.	} or o. o. amp. p. o .
	o. o.	amp.	p.	o	.	.	
15th pair	o. m.	amp.	am	.	a	.	

An additional dorsal p exists on the 4th joint of legs of 2nd, 6th and 9th pair, but on one side only. No sexual structure on the last two pairs of legs, the last being somewhat swollen (yet not as much as in *L. crassipes*) and bearing a single claw.

Female unknown. A single male specimen from Amara; XII, 1917.

The palaearctic members of the same group of *Lithobius* having rounded angles of tergites 9, 11 and 13, ocelli few disposed in rows, and the anal legs without coxolateral spine, without sexual structure and with a single claw, are: *crassipes* L. K., *æruuginosus* L. K., *fallax* Mural., *ignotus* Mural., and (possibly?) *argensis* Att. With none of them does the above specimen agree entirely, and nothing is known of the legs of *argensis*. Therefore, rather than create a new name for a single specimen, it is deemed wiser to ascribe it to the nearest related form, *L. æruuginosus*, in spite of the difference noticed in the spinal armature of the hind legs.

STRONGYLOSOMA PERSICUM Humbert & Saussure, 1869.

The sterno-pleural suture is a curved ridge sharpened on the second segment and gradually rounded backwards; it disappears after the 10th segment. The dorsal furrow of the lateral keels is straight on the non-poriferous segments and sinuate on the others.

The vulvar aperture of the 3rd segment is very wide, rounded laterally; the posterior margin is almost straight and moderately erected. Sternum of the second pair of legs poorly developed, very low and not as wide as the lateral expansions of the coxæ. The posterior surface of the latter is hollowed at the base so as to cause the distal half to appear swollen.

Vulvar invaginations shallow, scarcely deep enough to conceal the vulvæ and hardly distinct from one another. When at rest the vulvæ have the operculum (¹) turned upwards and the ridge outwards, the posterior end of the mound filling the aperture of the 3rd segment. Vulvæ (fig. 1 and 2) not much longer than deep. Operculum smaller than the mound, excised apically; the distal angles are produced and bear a particularly long and thick macrochætæ pointing backwards. Mound with its posterior end abruptly truncate. Outer valve shorter and higher than the inner, the latter being much lower than long. The valves are not fused posteriorly but the upper angles are produced internally into hooks, the concavities of which face each other. Surface of the valves with few and rather short setæ; no macrochætæ. The apodema is sinuous, it shows no superficial ornaments (as seen in *Polydesmus*) and seems destitute of internal appendages. No trace of a shield could be noticed.

(¹) The description of vulvæ having so far been entirely neglected and no English terms having been applied to the different parts of these organs, it is proposed to use provisionally the following:—

operculum = (l'opercule) the smallest, plate-like part of the vulva, theoretically considered to be anterior;

mound = (la bourse) the largest and theoretically the posterior part, the anterior truncate surface of which is covered by the operculum;

valves = (les valves) inner and outer chitinized slopes of the mound bearing setæ and often macrochætæ;

ridge = (le cimier) apical space left between the valves, beginning immediately behind the anterior truncature and extending more or less backwards;

apodema = (l'apodème) gutter-shaped chitinous thickening extending longitudinally below the ridge and communicating with the latter by means of a

slit = (la fente de l'apodème);

diverticula = (les diverticules apodématiques) differently shaped appendages of the apodematic gutter, erroneously considered as glands by some authors;

The operculum articulates with the mound by means of

hinges = (les fourches);

shield = (le gorgerin) accessory posterior plate which is often missing and is eventually replaced by some expansion of the valves.

The French terms are those used by Bolemann and Lichtenstein, "Les

vulves des Diplopodes," Arch. Zool. exper. gen., LVIII, 4, 1919.

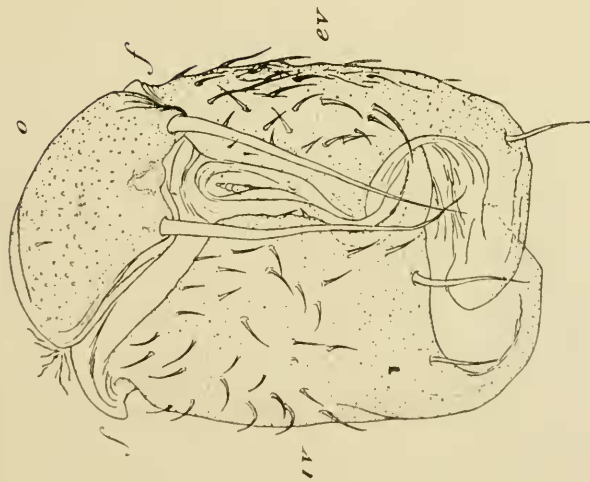


Fig. 1.

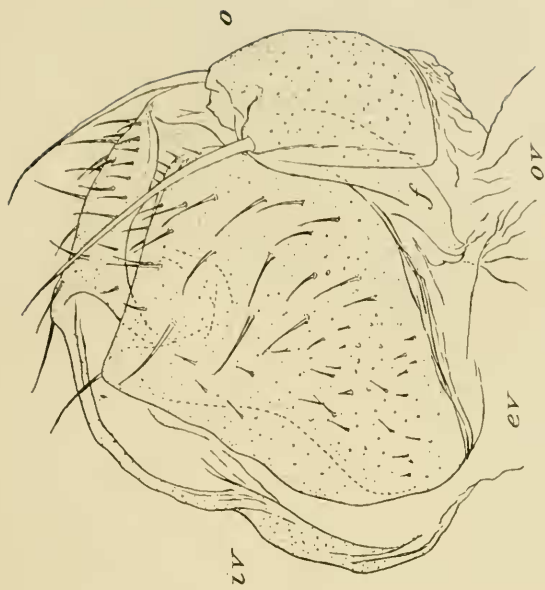


Fig. 2.

STRONGYLOSOMA PERSICUM, H. & S

A sketch of the male gonapods (fig. 3) is added to show the development of the secondary ramus. Attems states that this ramus is formed of two laminae, a fact which could not be ascertained.

Amara; XII, 1917; 2, I, 1918, "under fallen palm branches"; III, 1918.

PERSIA.

PACHYMERIUM CAUCASICUM Attems, 1903.

One male specimen with 47 pair of legs.

Resht; II, 1919.

LITHOBIUS BUXTONI, n. sp.

♂: length about 10 mill.

Colour drab. Head-plate with black margins and a black median spot. Main tergites with black lateral and posterior edges and a black dorso-median line. Mouth-pieces and ventral surface pale yellow. Anterior legs pale becoming gradually fuscate backwards and from the apex towards the base, the last legs being entirely dark coloured.

The cephalic plate as well as the anterior main tergites have their marginal pad entire; this is interrupted mesially on the 7th tergite only. Posterior margin of the 8th, 10th and 15th tergites scarcely or feebly emarginate; posterior margin of the 12th and 14th tergites decidedly excised, the posterior angles being acute and somewhat raised. Tergites 9, 11 and 13 with moderately produced, but sharp angles. Surface of all the tergites strongly rugose and showing oblique, irregular longitudinal furrows.

Ocelli few, 1+3, 2, 2. Antennae long, 37-40 jointed.

Coxosternum of maxillipedes with the produced anterior margin armed with 2+2 small teeth; no lateral spines could be detected.

Coxal pores 3, 2, 2, 2, small, rounded.

Spine armature of legs of

1st pair	$\frac{o. o. \quad p. \quad a \quad p. \quad a \quad .}{o. o. \quad o. \quad am. \quad m. \quad .}$	
2nd pair	$\frac{o. o. \quad mp. \quad a \quad p. \quad a \quad .}{o. o. \quad m. \quad am. \quad m. \quad .}$	
3rd pair	$\frac{o. o. \quad mp. \quad a \quad p. \quad a \quad p.}{o. o. \quad m. \quad am. \quad m. \quad .}$	
4th pair	$\frac{o. o. \quad mp. \quad a \quad p. \quad a \quad p.}{o. o. \quad m. \quad am. \quad m. \quad .}$	
5th to 11th pair	$\frac{o. o. \quad amp. \quad a \quad p. \quad a \quad p.}{o. o. \quad m. \quad am. \quad am. \quad .}$	or } with an occasional p below the 4th joint on P. 10.
12th pair	$\frac{o. o. \quad amp. \quad a \quad p. \quad a \quad p.}{o. o. \quad mp. \quad am. \quad am. \quad .}$	
13th pair	$\frac{o. o. \quad amp. \quad a \quad p. \quad a \quad p.}{o. m. \quad amp. \quad am. \quad am. \quad .}$	{ accidentally a dorsal m is found on the 4th joint.
14th pair	$\frac{o. o. \quad amp. \quad a \quad p. \quad a \quad p.}{o. m. \quad amp. \quad am. \quad m. \quad .}$	
15th pair	$\frac{o. o. \quad amp. \quad p. \quad o. \quad .}{o. m. \quad amp. \quad am. \quad m. \quad .}$	or $\frac{o. o. \quad amp. \quad o. \quad o. \quad .}{o. m. \quad amp. \quad amp. \quad m. \quad .}$

15th pair without coxolateral spine; claw double. No special sexual structure on 14th or 15th pair.

The female is unknown.

Resht; II, 1919.